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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,357	06/30/2003	Terho Kaikuranta	944-003.176/NC36625US	2666

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EXAMINER

HAQ, MOHAMMAD AAMIR

ART UNIT PAPER NUMBER

2642

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/611,357	Applicant(s) KAIKURANTA, TERHO	
	Examiner Aamir Haq	Art Unit 2642	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 January 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

1. Claims 5 and 13 recites the limitation "the actuation motor". There is insufficient antecedent basis for this limitation in the claim. Correction is required

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 8 – 10 and 15 - 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US 4,588,918 (Yamamoto et al.).

As to claims 1, 8, 9, 15 and 16, Yamamoto discloses an arrangement for creating a user detected vibration with a low mass actuator, comprising:

a metallic cap (34 and 35 in fig. 1), read as the claimed product cover, having two parts coupled by an elastic joint (32 in fig. 1).

A piezo element (36 in fig. 1), read as the claimed low mass actuator, coupled between the two parts (35 and 35), responsive to an actuation signal, for vibrating the

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two parts of the metallic cap in relation to one another (Abstract, col. 2 lines 27 – 51, col. 3 lines 26 – 55, col. 4 lines 56 – 65, col. 5 lines 18 – 25)

As to claims 2 and 10, see col. 3 lines 32 – 36. Note that a silicon rubber reads on the claimed an adhesive layer.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 4 – 7, 12 – 14 and 17 - 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,588,918 (Yamamoto et al.) in view of US 6,995,744 (Moore et al.) hereinafter Moore.

As to claims 4, 7 and 12, Yamamoto has been discussed above. Yamamoto does not disclose expressly that the arrangement is a mobile phone. However, Moore discloses that a linear actuator is used to provide inertial movement or vibrations to a handheld device such as a mouse, joystick, mobile phone or any other device that can benefit from inertial force sensations (col. 2 lines 47 - 54, col. 6 lines 22 – 34, col. 5 lines 13 – 29, col. 10 lines 29 – 36 of Moore).

Yamamoto and Moore are analogous art because they are directed to a similar problem solving area, namely vibrating devices. At the time of the invention it would have been obvious to a person of ordinary skill in the art to use the low mass actuator of

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Yamamoto in a mobile phone in view of the teachings of Moore. The motivation for doing so would have been to make a mobile phone benefit from inertial force sensations (col. 5 lines 15 – 17 of Moore). It is notoriously old and well known in the art to make mobile devices vibrate instead of having audible alerts. Therefore, it would have been obvious to combine Moore with Yamamoto to obtain the invention as specified in the claims.

As to claims 5 and 13, applicant has admitted that the low mass actuator is well known in the art (see pages 6 – 7 in applicant's specification), since such actuator is well known, then its movement in the range of 5 – 15 microns should also be viewed as a well known range.

As to claims 6 and 14, Moore teaches power supplies for providing power to the actuator. One of ordinary skill in the art at the time of the invention would understand that a power supply could comprise a battery. This is especially the case in mobile electronics such as phones, wireless mice, wireless joystick, etc. (col. 13 lines 15 – 23 of Moore)

As to claims 17 and 18, see fig. 1a, 1b, and col. 5 lines 13 – 18 of Moore. These types of product casings are inherently or at the least obviously inelastic material.

4. Claims 3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over US 4,588,918 (Yamamoto et al.) in view of US 6,163,077 (Lucas).

As to claims 3 and 11, Yamamoto has been discussed above. Yamamoto does not disclose expressly that the low mass actuator is a linear actuator. However,

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Yamamoto teaches the same structure and the limitation of the linear actuator is only an intended use. To provide further evidence that this structure is the same and the limitation is only an intended use, Lucas is provided. Lucas states that "In general, the vibrating resonator can provide large amounts of vibrational mechanical power that can be used to drive an electrical alternator, as previously described, or it can be used as a linear motor for many other applications. Linear motors are widespread and their uses are well know in to those of skill in the art." (col. 5 lines 23 – 29 of Lucas). Therefore, at the time of the invention it would have been obvious to one of skill in the art to use the low mass actuator as a linear actuator to provide vibrations to the product.

Conclusion

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aamir Haq whose telephone number is 571-272-5511.

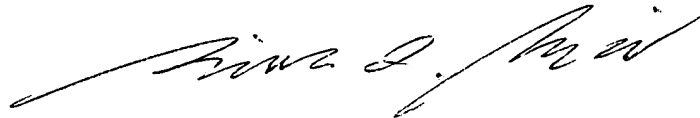
The examiner can normally be reached on Mon thru Fri 8:30am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ahmad Matar can be reached on 571-272-7488. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.H.
February 28, 2006

A handwritten signature in black ink, appearing to read "Bing Q. Bui", written in a cursive style.

BING Q. BUI
PRIMARY EXAMINER